

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

Land Reconstruction

Currently Mined Land

(Acre)

Code 544

DEFINITION

Restoring currently mined land to an acceptable form and for a planned use.

PURPOSES

(1) To prevent permanent damage to soil and water resources in and near mined areas, (2) to restore the productivity of soils to permit their pre-mining use or a more intensive use, and (3) to control erosion, preserve the environment, and provide an economic use of the land.

CONDITIONS WHERE PRACTICE APPLIES

Currently mined areas that will be adversely affected by mining practices.

CRITERIA

None identified for this practice standard.

CONSIDERATIONS

1. With use of soil survey, evaluate soils significant to reconstruction operations and identify prime farmland.
2. Evaluate water and other related resources.
3. Consider locations for storage of soil material, access roads, and possible permanent impoundments.

4. Consider measures for placement of spoil, water disposal, replacement of soil material, restoration of soil productivity, and revegetation of disturbed areas.
5. Prepare a reclamation plan specifying required procedures for conducting reconstruction operations.

Water Quality and Quantity

This practice is a management system that may combine practices to most conservation goals. Consult the planning considerations for water quantity and quality for the practices used in this system.

A special concern is the potential for uncovering or redistributing toxic materials from earth moving activities.

PLANS AND SPECIFICATIONS

Site preparation. Areas shall be cleared of trees, logs, brush, rubbish, and other undesirable materials. Areas to be preserved, including those containing vegetation, stream corridors, natural springs, or other important features, shall be properly identified.

Removal of material for soil reconstruction. All upper soil horizons to be used in reconstructing the soil shall be removed from the immediate area before drilling for blasting, mining, or any surface disturbance other than removal of woody plants.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

All of the A-horizon shall be removed for use as surface soil on disturbed areas. If the A-horizon is less than 6 inches thick, enough material, other than bedrock, immediately below the A-horizon can be removed and used to obtain this thickness. If the total thickness of the available material is less than 6 inches, all unconsolidated material can be used.

If the area is prime farmland the B-horizon shall be removed and segregated for use as subsoil. The minimum depth of the soil and the soil material to be reconstructed shall be 48 inches or equal to the depth of the subsurface horizon in the natural soil, whichever is less. If root-inhibiting layers, such as bedrock underlie the natural soil, depth can be less than the minimum depth.

If it is determined that the overburden material is suitable, it must be removed, segregated, and replaced according to the requirements specified in this standard.

Storage of soil material. If it is impractical to spread the material immediately after the land is regraded, it must be stockpiled. Stockpiles shall be selectively located and protected against wind and water erosion, unnecessary compaction, and contamination by undesirable materials. An effective vegetation cover or other suitable practices can provide adequate protection.

Replacement of soil material. Before spreading topsoil, the regraded areas must be scarified or otherwise treated to eliminate slippage surfaces and to promote root penetration.

Topsoil shall be spread in a manner that:

1. Insures that the position and thickness of each horizon is equivalent to those in the undisturbed soil.
2. Prevents excess compaction. The bulk density of the reconstructed soil when moist must permit the soil to support plant growth at a level equivalent to that of a similar layer in the undisturbed soil.
3. Topsoil is to be protected against wind and water erosion prior to being vegetated.

Nutrients and soil amendments. After the topsoil has been spread on the disturbed areas, nutrients and soil amendments shall be applied according to the needs determined by soil tests.

OPERATION AND MAINTENANCE

An operation and maintenance plan will be developed in keeping with this practice standard.